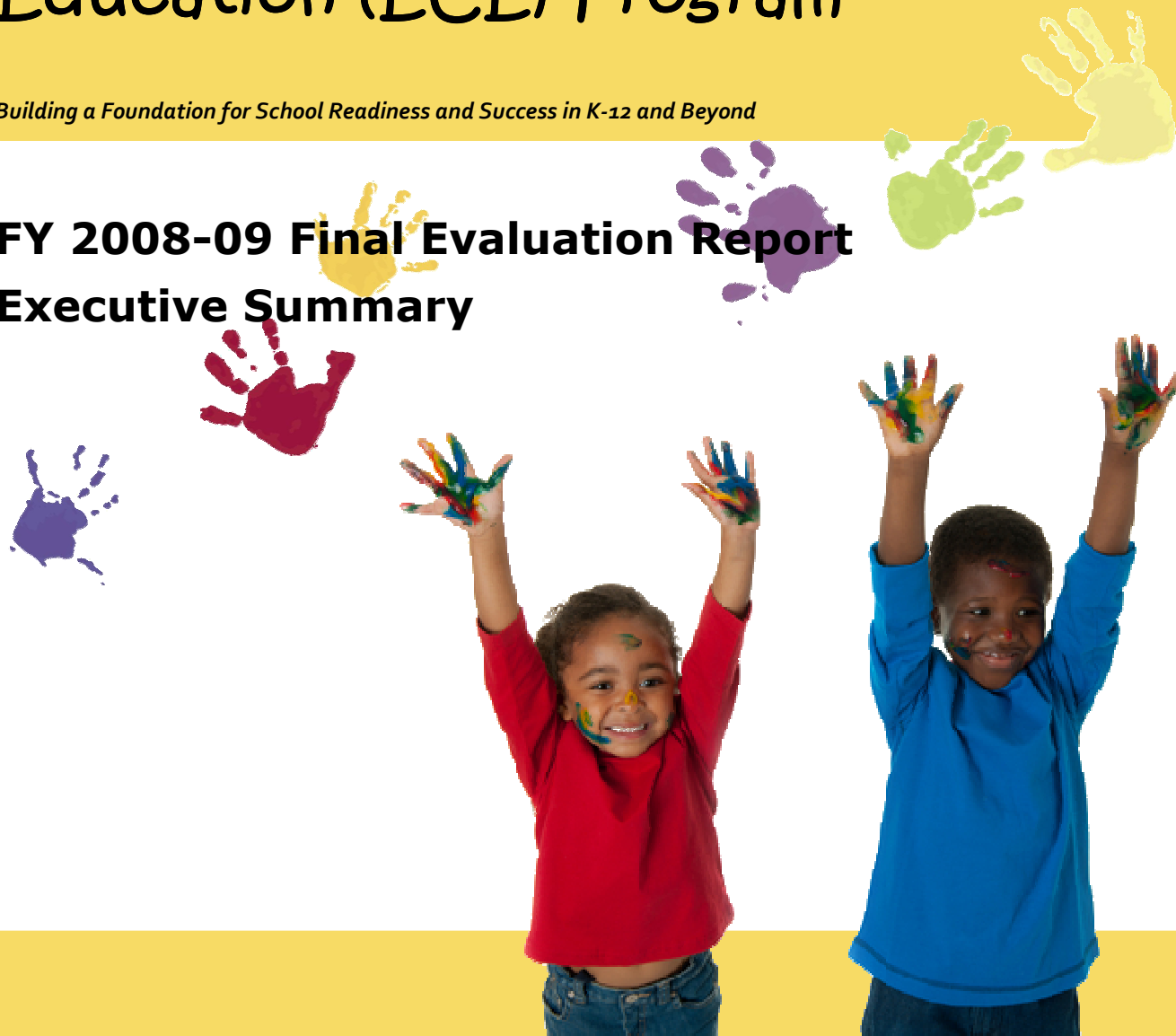


# Assembly Bill 627

## Nevada Early Childhood Education (ECE) Program

*Building a Foundation for School Readiness and Success in K-12 and Beyond*

### FY 2008-09 Final Evaluation Report Executive Summary



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**NEVADA DEPARTMENT OF EDUCATION**

Office of Special Education, Elementary and Secondary  
Education, and School Improvement Programs



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## EXECUTIVE SUMMARY

The 2007 Nevada State Legislature passed Assembly Bill (AB) 627 that continued the funding of the Nevada Early Childhood Education (ECE) Program and appropriated \$3,251,671 in the 2007-08 fiscal year and \$3,338,875 in the 2008-2009 fiscal year. The purpose of the legislation is to initiate or expand pre-kindergarten education programs.



Nine school districts and one community-based organization operated an early childhood education program in 2008-09. The nine school districts are Carson City, Churchill County, Clark County, Elko County, Humboldt County, Nye County, Pershing County, Washoe County, and White Pine County. The community-based organization is Great Basin College in Elko.

During 2008-09, the ten Nevada ECE projects provided services to 1,089 families at 33 different sites, including 1,123 children and 1,130 adults. Of the 1,123 children served in Nevada ECE during the 2008-09 school year, 950 children were in the Nevada ECE program on December 15, 2008. Using the figures of 950 children as an average daily count and the total award amount of \$3,338,875, the average cost of the Nevada ECE program per child in 2008-09 was \$3,515. The 1,123 program children represent 1.4 percent of the estimated 78,176 three to four year-old children in Nevada (2008 American Community Survey).

The Nevada Department of Education (NDE) conducted an annual and longitudinal evaluation of the Nevada ECE program in 2008-09, as directed by AB 627. The primary focus of the evaluation is to determine the effectiveness of the program on the developmental progress of children and parental involvement, both short-term and long-term effects.

Research on early childhood education has found that preschool education can improve the learning and development of young children. Many studies have investigated the short-term effects of preschool education for children. These studies have clearly shown that participation in quality preschool education programs have short-term effects on the cognitive, social, emotional, and physical development.

Several meta-analyses on short-term effects calculated that preschool education programs produce an average gain of one-half (0.50) standard deviation on cognitive development. This is the equivalent of a move from the 30th to the 50th percentile for achievement test scores. In

### Key Findings—

The Nevada Early Childhood Education Program:

- ◆ Helped prepare Nevada children for kindergarten and beyond.
- ◆ Helped parents become more involved in their children's learning.
- ◆ Met or exceeded all five program indicators on the developmental progress of children and parent involvement.
- ◆ Showed longer-term effects on the student academic skills.
- ◆ Served 1.4 percent of the estimated three to four- year-old population in Nevada.

other words, a one-half standard deviation gain can reduce the school readiness gap between children in poverty and the national average by half.

Other studies have examined preschool education's long-term effects, providing information on effects into elementary school and beyond. These studies found that preschool education has significant lasting effects on cognitive abilities, school progress (grade retention, special education placement, and high school graduation), and social behavior. While the estimated effects decline as students move from their immediate experience to elementary school, to adolescence, and to adulthood follow-up, the effects, including those on cognitive abilities, persist. Perhaps even more importantly for the Nevada ECE program, which serves large numbers of non-English speaking Hispanic students, these long-term effects may be intensified for non-English speaking Hispanic children. That is, the language skills they acquire in preschool may reduce their need for special language services later when they enter elementary school. These research studies suggest that long-term effects of preschool help close the achievement gap and level the playing field for all children to succeed.

The outcomes found in national longitudinal evaluations of preschool programs suggest that the positive long-term effects are primarily because preschool children had different experiences in elementary school due to the cognitive gains achieved in preschool. Increasing children's cognitive abilities early helps them to transition into school and reduces the likelihood that they will be tracked into low ability groups, placed in special education, or retained in grade.

### Findings from Annual Evaluation: Short-Term Effects

The primary purpose of the annual evaluation is to investigate the performance of children and adults on five outcome indicators: two indicators on the developmental progress of children and three indicators on parental involvement. The results show that Nevada ECE children met the expected performance levels for all five indicators, as shown below.

Perhaps even more importantly, the results show that a greater percentage of children learning the English language made gains and made larger gains than English speaking children in both receptive vocabulary (PPVT) and expressive communication (EOWPVT).

Outcome Indicators	Actual	Status
<b>Developmental Progress of Children</b>		
<b><i>Indicator 1: Reading Readiness: Individual Student Gain</i></b> Eighty percent (80%) of Early Childhood Education children from three years old until they enter kindergarten with a minimum of four months of participation will show improvement in auditory comprehension and expressive communication as measured by a standard score increase on the Peabody Picture Vocabulary Test (PPVT) and the Expressive One-Word Picture Vocabulary Test (EOWPVT).	PPVT- 87.6 % EOWPVT- 90.5 %	Met / Exceeded

Outcome Indicators	Actual	Status
<b>Developmental Progress of Children (cont.)</b>		
<b><i>Indicator 2: Reading Readiness: Average Gain</i></b> Early Childhood Education children from birth until they enter kindergarten with a minimum of four months of participation will make an average gain of seven standard score points in auditory comprehension as measured by the Peabody Picture Vocabulary Test (PPVT) and of 10 standard score points in expressive communication as measured by the Expressive One-Word Picture Vocabulary Test (EOWPVT).	PPVT- 11.1 points EOWPVT- 14.3 points	Met / Exceeded
<b>Parental Involvement</b>		
<b><i>Indicator 1: Individual Parenting Goals.</i></b> Ninety-two percent (92%) of participating adults enrolled in Early Childhood Education for at least four months will meet at least one goal related to parenting skills (e.g., developmental appropriateness, positive discipline, teaching and learning, care-giving environment) within the reporting year.	99.2 %	Met / Exceeded
<b><i>Indicator 2: Time with Children</i></b> Seventy percent (70%) of first-year Early Childhood Education parents will increase the amount of time they spend with their children weekly within a reporting year.	94.8 %	Met / Exceeded
<b><i>Indicator 3: Reading with Children</i></b> Seventy percent (70%) of first-year Early Childhood Education parents will increase the amount of time they spend reading with their children within a reporting year.	94.4 %	Met / Exceeded

## Findings from Longitudinal Evaluation: Long-Term Effects

The longitudinal evaluation followed two cohorts of Nevada ECE children:

- Cohort 1 — four-year-olds who participated in Nevada ECE during 2003-04 and entered grade 4 in 2008-09, and
- Cohort 3 — four-year-olds who participated in Nevada ECE during 2005-06 and entered grade 2 in 2008-09.

The results show that Cohort 1 ECE students scored higher than non-ECE students on the grade 4 Nevada CRT reading and math tests, and a larger percent of students were proficient. Perhaps more importantly, the differences between the means of Cohort 1 ECE students and non-ECE students are significant in reading ( $p \leq .05$ ) and math ( $p \leq .01$ ). The evaluation used a stronger research design with Cohort 3, providing more conclusive evidence of program effects. Cohort 3 ECE students made large gains on the PPVT (receptive vocabulary) and EOWPVT (expressive communication) while in preschool, and then continued to improve on the gains they achieved in preschool through the end of grade 2 in expressive vocabulary ( $p \leq .05$ ) and maintained their

relative performance in receptive vocabulary. The following table summarizes the related results including data collected, instruments used, and outcomes.

<b>Cohort 1</b>	<b>Instrument</b>	<b>Outcomes</b>
<b>Developmental Progress of Children</b>		
<i>Student Learning</i>	Nevada CRT Reading and Math, Grade 4	Cohort 1 students scored higher than non ECE students in reading ( $p \leq .05$ ) and math ( $p \leq .01$ ) and a larger percent of Cohort 1 students are proficient.
<b>Parental Involvement</b>		
<i>Parent Involvement</i>	Teacher Survey	Nevada ECE parents attended parent/teacher conferences at an equivalent rate as parents of schoolmates when the ECE children were in kindergarten during 2004-05 and in grade 4 during 2008-09.
<b>Cohort 3</b>	<b>Instrument</b>	<b>Outcomes</b>
<b>Developmental Progress of Children</b>		
<i>Student Learning</i>	PPVT/EOWPVT	Cohort 3 students made large gains on the PPVT and the EOWPVT while in preschool, and then improved on their level of performance in expressive vocabulary through the end of grade 2, ( $p \leq .01$ ) and maintained their level of performance in receptive vocabulary.
<b>Parental Involvement</b>		
<i>Parent Involvement</i>	Teacher Survey	Nevada ECE parents attended parent/teacher conferences at a higher rate than parents of schoolmates when the ECE children were in kindergarten during 2006-07 and at an equal rate in grade 2 during 2008-09.

## Conclusions

The results from the 2008-09 annual evaluation of the Nevada ECE program, as well as all previous annual evaluations, support the national research on the short-term effects of quality preschool education programs. Perhaps more importantly, the results from the longitudinal evaluation provide solid initial evidence that the impact of Nevada ECE is consistent with the national research on the long-term cognitive effects of quality preschool education programs. The positive results of the Nevada ECE program can, in part, be attributed to the fact that Nevada state law requires prekindergarten teachers to be highly qualified, either by holding a special license or endorsement in early childhood education. While certified preschool teachers cost more than non-certified preschool teachers, the positive results from this program as well as from the research literature supports the requirements set by state law and justifies the funds required to hire highly qualified preschool teaching staff.

### *Developmental Progress of Children.*

- *Short-Term Effects.* The Nevada ECE Program had short-term effects on the developmental progress of children. Nevada ECE children made large cognitive gains in preschool and were clearly better prepared to enter kindergarten academically than if they had not participated in Nevada ECE. This is an important achievement for the largely at-



risk student population served in the program, because it closed some of the gap in school readiness with average students and avoided some early obstacles that most at-risk student populations face, thus providing them a better chance at early school success.

It is especially important for the large number of English language learners in the program who, in fact, may have even benefited the most academically from the Nevada ECE program. These developmental gains during early learning help ease their transition into school, preparing them for future success.

- *Long-Term Effects.* After preschool, it appears Nevada ECE children improved on some of the significant learning gains they achieved in preschool through grade 2, and maintained the gains achieved in preschool through grade 4. In other words, it appears Nevada ECE children continued to reduce the achievement gap between children in poverty and the national average through grade 2.

#### ***Parent Involvement.***

- *Short-Term Effects.* The parents of the children who participated in the Nevada ECE program became more involved in the education of their children, including spending more quality time with them, especially in terms of reading with their children. As research has learned, increased parent involvement leads to increased student achievement due, in part, to the value of education that parents convey to their children by their own actions.
- *Long-Term Effects.* After preschool, the parents of the children continued to be very involved in their children's learning. In fact, the parents of the Nevada ECE children were even more involved than their schoolmates' parents during kindergarten. After kindergarten, the parents of the Nevada ECE children continued to be involved in their children's learning in grade 2 and grade 4 at a level commensurate with schoolmates' parents.